

ABSTRACT

As a preparation process, a gas supply source 10A supplies WF_6 gas for restricting formation of nuclei for growing a metal film onto a surface of a process target semiconductor wafer W for a predetermined period of time. After the
5 preparation process is performed, the gas supply source 10A and a gas supply source 10B respectively supply WF_6 gas and NH_3 gas onto the surface of the semiconductor wafer W to which the preparation process has been applied, for a predetermined period of time. Thus, a tungsten nitride film which is a metal compound film whose surface has bumps is formed on the semiconductor wafer W.
10 A controller 51 controls operations of the gas supply sources 10A and 10B, and the like in accordance with a program or the like previously provided.

10052306-062402